

Pattern Puzzles – Pack 8

Puzzle 1. What comes next in the sequence?

1	2	5	8	15	28	51	94	?
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A) 122	B) 173	C) 174	D) 145
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Puzzle 2. What comes next in the sequence?

15	11	10	20	16	13	25	21	?
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A) 26	B) 30	C) 17	D) 16
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Puzzle 3. What comes next in the sequence?

13	15	21	39	93	255	741	?
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A) 1227	B) 2199	C) 1713	D) 2201
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Puzzle 4. What comes next in the sequence?

3	6	15	42	123	366	1095	?
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A) 1824	B) 3282	C) 3285	D) 2553
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Puzzle 5. What comes next in the sequence?

2	3	2	7	12	21	40	73	?
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A) 123	B) 113	C) 134	D) 94
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Puzzle 6. What comes next in the sequence?

5	5	4	14	23	41	78	142	?
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|--------|--------|--------|--------|
| A) 215 | B) 220 | C) 183 | D) 261 |
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Puzzle 7. What comes next in the sequence?

11	2	6	18	7	10	25	12	?
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| A) 32 | B) 15 | C) 14 | D) 17 |
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Puzzle 8. What comes next in the sequence?

8	19	42	101	268	759	?
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| A) 2222 | B) 2217 | C) 764 | D) 2227 |
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Puzzle 9. What comes next in the sequence?

8	21	47	99	203	411	?
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| A) 411 | B) 827 | C) 826 | D) 822 |
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Puzzle 10. What comes next in the sequence?

12	22	44	84	148	242	372	?
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| A) 544 | B) 502 | C) 550 | D) 538 |
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Answer Key

1. **B) 173**

Rule: $a(n) = a(n-1) + a(n-2) + a(n-3)$
(tribonacci).

6. **D) 261**

Rule: $a(n) = a(n-1) + a(n-2) + a(n-3)$
(tribonacci).

2. **D) 16**

Three interleaved arithmetic series (period 3).

7. **C) 14**

Three interleaved arithmetic series (period 3).

3. **B) 2199**

Differences form geometric sequence ($\times 3$): 2, 6, 18, 54, 162, 486, 1458.

8. **A) 2222**

Formula: $3^n + 5n$. $n=7$: $2187 + 35 = 2222$.

4. **B) 3282**

Differences form geometric sequence ($\times 3$): 3, 9, 27, 81, 243, 729, 2187.

9. **B) 827**

Rule: $a(n) = 2 \times a(n-1) + 5$.

5. **C) 134**

Rule: $a(n) = a(n-1) + a(n-2) + a(n-3)$
(tribonacci).

10. **A) 544**

1st diffs: 10, 22, 40, 64, 94, 130.